ABSTRACT

SOCIAL WORK

FOWLKES, NADINE L. B.A., OREGON STATE UNIVERSITY, 1993

AN EXPLORATORY STUDY OF THE RELATIONSHIP BETWEEN DEPRESSION AND MAMMOGRAPHY COMPLIANCE IN ELDERLY AFRICAN-AMERICAN WOMEN

Advisor: Dr. Gale Horton

Thesis dated May, 1997

The purpose of this study was to examine the relationship between depression and mammography to determine if depressive characteristics have associations with breast cancer screening practices. The sampling frame consisted of 128 elderly participants of a senior citizen non-residential center, Quality Living Services, Inc.,(QLS). The method of obtaining information was the SF-36 Health Status Survey generated by the New England Medical Center, and a basic questionnaire of Cancer Screening Exams developed by Dr. John F.C. Sung of Morehouse School of Medicine.

The results of the questionnaires were analyzed by frequency distribution, mean, median, probability and chi-square, using the statistical package Epi Info v6. The theoretical base for the research focused on cognitive-behavioral theory. The evidence of these findings did not support the hypothesis that elderly African-American women who have depressive characteristics are less likely to receive a cancer screening (mammography) exam.

AN EXPLORATORY STUDY OF THE RELATIONSHIP BETWEEN DEPRESSION AND MAMMOGRAPHY COMPLIANCE IN ELDERLY AFRICAN-AMERICAN WOMEN

A THESIS

SUBMITTED TO THE FACULTY OF CLARK ATLANTA UNIVERSITY

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR

THE DEGREE OF MASTER OF SOCIAL WORK

BY

NADINE L. FOWLKES

SCHOOL OF SOCIAL WORK

ATLANTA, GEORGIA

MAY 1997

R= V T = 50

ACKNOWLEDGMENTS

First, I thank my Lord Superior for guiding me and providing love, encouragement and amazing strength in all areas of my life and especially with the completion of this research project.

Thanks to my family (the Fowlkes') of Portland, Oregon for providing me love, patience, and support in my transition to the State of Georgia and throughout graduate school. A special thanks to Dr. Richard Lyle and the entire School of Social Work. Appreciation is extended to all the faculty for guiding, enlightening and bestowing knowledge that will always be remembered. I would also like to acknowledge the Morehouse School of Medicine departments of Minority Biomedical Research Support (MBRS), Community Health & Preventive Medicine (CH/PM), and the Quality Living Services., Inc. These departments have encouraged my educational goals and helped direct the completion of this document.

TABLE OF CONTENTS

Page

ACKNOWLEDGMENTS ii

LIST OF TABLES v

CHAPTER

I. INTRODUCTION 1

Breast Cancer & Mammography 5
Statement of the Problem 7
Significance and Purpose of the Study 8

II. REVIEW OF THE LITERATURE 10

Types of Depression 10
Depression in Women 13
Depression in African Americans 14
Depression in the Elderly 17
Symptoms & Treatment of Depression 19
Treatment of Depression 19
Cancer Screening 21
Theoretical Framework 23
Statement of Hypothesis 24
Definition of Terms 24

III. METHODOLOGY..... 26

Research Design 26
Site and Setting 26
Sampling 27
Instrumentation 28
Method of Analysis 29

IV. FINDINGS 30

Frequency Distribution Findings 34

V. DISCUSSION AND SUMMARY 38

Limitations of the Study 39
Theoretical Implications 39
Recommendations 40
Implications for Social Work Practice 41

Page

APPENDICES 43

A. Consent to Participate in Medical Research on Cancer Screening Intervention in an Inner City Community 43

B. Activity Report for Cancer Screening Survey 45

C. Index of SF-36 Health Status Survey 46

D. Index of Cancer Screening Questionnaire 47

BIBLIOGRAPHY 48

LIST OF TABLES

Table		Page
1.	Index of SF-36 Health Status Survey and Mammography Exam	30
2.	Cross tabulation Chi-Square of Mental Health Characteristics and Mammography Exam	33

CHAPTER I

INTRODUCTION

Depression has been identified as one of the most epidemic mental health problems in this country today. Depressive disorders are often described as the most prevalent form of psychopathology. These conditions are characterized by their maladaptive effects on mood, behavior, physiology, cognition and interpersonal functioning.

Depression is one of the more common emotions that affect people of all ages, races, classes and religions. Our emotions affect how we see and interact with our world, and at the same time they are responsive to life events around us. "Since ancient times, many scientists have tried to understand our emotions and mood changes, now thought of as depression."[1]

Most people think of depression only as sadness and low mood swings, however clinical depression is more than ordinary 'down' mood everyone experiences.

Depression is a whole body disorder which affects the way you both feel and think. Depression is a disease, not a fault or disorder.

According to the National Mental Health Association, each

---

[1]Michael K. Reed, "Depressive Symptoms in African-American Women," Journal of Multicultural Counseling and Development 24 (1966): 6-14.

year, 17.6 million adult Americans (one in ten) have experienced a depressive illness. In addition, roughly one-third of those who have experienced a depressive illness have sought treatment. Many barriers exist in medical treatment. Such barriers to treatment include unrecognized symptoms or belief that depression is "normal", which often lead to many confusions about treatment processes, misdiagnosis and screening issues.

Many Mental Health Organizations have found that the majority of Americans are confused about where to go for help. According to the Wirthlin group, 26% of Americans surveyed for clinical depression and seeking outside help had said they could "handle it" by themselves. 48% of participants surveyed said they would consult either a doctor or family friend, and sadly 3% of participants surveyed had said they "did not know what to do."[2]

Since there is a wide range of barriers preventing persons from seeking treatment, it is estimated that about 15% of those persons with major depression die of suicide.[3] "Low grade, so-called 'minor' depressions are prevalent disorders. Their chronic nature is recognized in the DSM-III rubic of dysthymia, which refers to depressive

---

[2]Alexandria, The National Mental Health Association, "American Attitudes about Clinical Depression and Its Treatment," (April 1996).

[3]Ibid.

symptomatology for at least two years."[4]

There are two serious types of clinical depression, major depression and bipolar disorder. Major depression occurs when five or more symptoms of depression have been present during a two week period. Of those affected with major depression, it is almost impossible to carry on daily activities such as eating, sleeping or simply enjoying life. It has also been said that no two people become depressed in exactly the same way. Clinical depression can occur once in a lifetime, or can reoccur several times during one's life span.

In the elderly, "...major depression is usually associated with some type of cognitive impairment, and dementia is often associated with the depressive symptoms.[5] Depressive illness among the aged and frail is now gaining massive attention. "With increasing longevity and the aging of the baby boom generation, the number of people 65 years and older will be increased by 40% between 1984 and 2010, and will represent nearly 14% of the general U.S. population.[6]

---

[4]Akiskal S. Hagop, et al., American Journal of Psychotherapy XLVI, 1 (1992).

[5]Thomas Yasmin, "What is the Relationship Between Depression and Dementia in the Elderly?" The Harvard Mental Health Letter (April, 1993).

[6]Department of Health and Human Services, National Institute of Mental Health, PA-92-44, Depression in Late Life (1992).

By the year 2000, there will be over 35 million people over the age of 65, representing about 13% of the U.S. population. In addition to longevity, the elderly are at an increased risk for psychosocial issues.

Depression in late life often goes unrecognized or untreated. Because the incidence of mental impairments is so much more prevalent in the elderly than in other populations, thorough assessment is mandatory."[7] Elderly patients may benefit from screening from depressive illness because often, neither the physician or patient may identify depression in the presence of multiple chronic sickness or disease that a patient may present.

Behavioral cycles which involve alternating mood-swings are called Manic Depressive Illnesses. A Manic-Depressive illness is better known as Bipolar disorder. Bipolar disorder classified as clinical depression can range from severe mood swings, from extreme lows to excessive highs. Bipolar disorder usually occurs during adolescence or young adulthood. "At least 1.2% of the American Population, or more than 3 million people, suffer from bipolar disorder."[8]

Most people who have been diagnosed with bipolar

---

[7]Bella H. Selan, "The Late Life Counseling Service: A Program for the Elderly," Hospital and Commcunity Psychiatry 31, 6 (1980).

[8] National Institute of Mental Health, National Institute of Health Bipolar Disorder--A Description, PUT 000019 (April 1995).

disorder have unusual behaviorism- irritability and or inability to relax. Behaviors during manic episodes range from excessive talking, racing thoughts, euphoricism and over activity. It has been said that some may engage in compulsive behavior, such as spending money excessively or engaging in risky sexual activity. Overall, bipolar disorder is often a chronic, reoccurring, yet treatable condition.

Breast Cancer and Mammography

Breast cancer is the most common type of cancer among American Women and the second most common cause of cancer death. During 1997, the American Cancer Society estimated 180,200 women will likely become diagnosed with new invasive cases of breast cancer.

The most obvious risk for breast cancer is a woman's age group, or increasing age. Age is a major risk - factor for breast cancer incidence because one is more likely to become diagnosed with the disease after the age of 40. "Given our poor understanding of the etiology of breast cancer and recent evidence that screening mammography helps reduce mortality from breast cancer for women between the ages of 40 and 49 as well as those over the age of 50, a woman's age becomes the single most relevant factor for recommending screening."[9] Other risk factors for breast

---

[9]Chronic Disease Control Division, Center for Environmental Health and Injury Control--Centers for Disease Control, "Premature mortality due to breast cancer--United States" Journal of American Medical Association 258, 229-

cancer are; familial history, obesity, menstruation and menopause factors and age at first live birth.

The appropriate exam for the detection of breast cancer is done by mammography. A mammogram exam is a low dose x-ray procedure that allows a doctor or health care professional to visualize the internal structure of the breast. "The National Cancer Institute figures show that only 17% of women over 50 get a mammogram on schedule.

Many women - "56% in the Roper poll - say it's because their doctors never told them they needed one."[10] Because of the widespread controversies regarding mammography, many women do not understand mammography guidelines.

To date, the American Cancer Society has developed detection guidelines that pertain to cancer-related check ups. The purpose of these guidelines are to help people understand the timely need of health screening exams.

The following recommendations are for the early detection of cancer in asymptomatic individuals.

Summary of American Cancer Society Recommendations For the Early Detection of Cancer in Asymptomatic People

	Sex	Age	Frequency
• Breast Self Examination	F	20 and over	Every Month

3231 (1987).

[10]Le Anne Kleinmann, "The Mammogram Muddle," Health (June 1990).

Summary of American Cancer Society Recommendations For the Early Detection of Cancer in Asymptomatic People --Cont'd.

	Sex	Age	Frequency
• Clinical Breast Examination	F	20-40 Over 40	Every 3 years Every year
• *Mammography	F	40-49 50 and over	Every 1-2 years Every year

** Screening for mammography should begin by age 40*

The above recommendations are intended to help health care providers, patients and professionals determine which early cancer detection test is most appropriate for the individual's needs.

Statement of the Problem

Despite cancer remaining a leading public health problem among Black Americans and the Elderly, screening modalities for cancers are greatly under utilized in these populations."[11]

Previous research indicates that Black Americans have poorer survival rates from cancer than their white counterparts. Recent health promotional efforts have not quite narrowed the gap. It has been suggested that ..."at least half of the difference in cancer survival rates among African-Americans and other socioeconomically disadvantaged

---

[11]Harold P. Freeman, "Cancer in the Socioeconomically Disadvantaged." Cancer 39, 5 (1989).

people as compared to whites and the affluent is due to inadequate screening, late diagnosis and a lack of other preventive measures and practices."[12]

In addition, the application of a screening test is a complex process with many hidden issues. It is obvious that the screening test must be applied at the right time, to the appropriate population, and administered by educated health professionals to be considered effective.

Significance and Purpose of the Study

"Although there is massive literature on cancer prevention, clinical depression and differential screening measures for cancer, little material and few cancer screening studies have been designed toward special population groups, in particular Black Americans and the Elderly."[13]

In conjunction with the Morehouse School of Medicine-Department of Community Health and Preventive Medicine, the purpose of this study is to identify a mental health factor (depression)and determine if depressive characteristics may be contributing to a lack of mammography screening examination by elderly African-American women after the age of 55. It is established by the researcher that further

---

[12]L. Jack, Jr. et al. "Cancer among low-income African Americans: Implications for Culture and Community Based Health Promotion," Welness Perspective 9 (1993): 58-68.

[13]Ibid., 12.

exploration into depressive characteristics among elderly African-American women may significantly contribute to pre-existing cancer screening research, and additional knowledge in the field of social work.

The knowledge gained from this study can assist social workers and health care professionals in understanding depressive associations and it's relationship to breast cancer screening practices.

CHAPTER II

REVIEW OF THE LITERATURE

Depression is a common problem in society often associated with high degrees of suffering. "Each year, more than 17 million Americans suffer from clinical depression. Young, old, man or woman regardless of race or income - anyone can experience depression."[1]

Clinical depression is also known as depressive disorder, which can be an entire body illness. This specific illness is both physical and emotional, involving your body, mood, feelings and thought. It also affects the way you eat, sleep, think and feel about yourself.

A depressive disorder is <u>not</u> the same as having the blues or simply having a bad day. People who suffer with depressive disorders cannot remedy their illness alone. An attempt of any such behavior can often result in prolonged accurate treatment. Without proper treatment, clinical depression can last for weeks, months and years. If left absolutely untreated, depression can result in death.

<u>Types of Depression</u>

Depressive disorders come in different forms, just as other types of illnesses. "*Major Depression* is manifested by a combination of symptoms that interfere with the ability to

---

[1]Alexandria, National Mental Health Association, "Depression: What You Need to Know," Publication No. 213 (1994).

work, sleep, eat and enjoy once pleasurable activities."[2] Major depression is an obvious marked behavioral change. At least five behavioral symptoms of depression such as (appetite change, fatigue, diminished pleasure of activities, insomnia and suicidal ideation) are necessary to make a true accurate diagnosis of Major Depression.

The onset of a *Bipolar Disorder* typically begins during adolescence or young adulthood. In most persons with bipolar disorder, the disease is recurrent. "It may be helpful to think of various mood states as a spectrum, or a continuous range: at one end is severe depression, which shades into moderate depression, then mild and brief disturbance of mood we call "the blues", then normal mood, then hypomania (a mild form of mania), and then mania. The person with bipolar disorder swings along this entire spectrum, from one state to another."[3]

In addition, persons with bipolar disorder have reoccurring episodes. A previous study by the National Institute of Health " ... indicated that more than 80% of group patients had four or more episodes, there does not have to be an alteration between depression and mania; a patient may have several depressive episodes or several

---

[2]Ibid., p. 12.

[3]Alexandria, National Institute of Mental Health, "Bipolar Disorder--A Description," PUT 00-0019 (April 1995).

manic ones in a row."[4] In all forms of bipolar disorder rapid cycling or mood swings occur.

Current research suggests that greater patient benefit is to be gained by diagnosing and treating bipolar disorder as early as possible. Mental health professionals indicate "...that each series of bipolar disorder outbursts will almost always increase the likelihood of future episodes", therefore the importance of early identification is critical.

Dysthymia is the chronic form of depression that affects around 10 million persons or about 5.4% of the American population. As with any other depressive illness, dysthymia occurs two to three times more in women compared to men. Moreover, dysthymic symptoms are similar to other form of depression; joyless mood, low self-esteem, sleep problems, social withdraw and often thoughts of suicide. According to the DSM-IV, persons who are diagnosed with dysthymic disorder have chronically depressed mood that occur for most of the day, more days than not, for at least two years.

Dysthymia often coexists with other types of psychiatric or medical conditions. "As many as 50% of persons suffering from dysthymia will later develop more severe or major depressive episodes, further reducing their

---

[4]Ibid.

ability to cope."[5] Furthermore, dysthymia is also present in persons with chronic fatigue syndrome, hypothyroidism, sleep disorders and somatoform disorders (conditions where people complain of medical symptoms that have no physical presence). Dysthymic disorders and other related forms of chronic depression constitute a major health problem, therefore, various treatments should aim to decrease the prevalence of this disorder in society today.

Depression in Women

Depression exists in many different forms and degrees. In previous psychological literature, there is a general consensus that women mostly outnumber men in the diagnosis and incidence of depression. "It has been suggested that the different rates of depression may be attributed to women's greater willingness to admit affective symptoms, or to a higher frequency with which they seek medical help."[6] In addition, the many multidimensional stresses that women face, such as major responsibilities at home, work and caring for children may also contribute to behavioral changes relating to clinical depression.

There are some social theories of clinical depression that appear related to women specifically. The many

---

[5]Rockville, National Institute of Health, National Institute of Mental Health, Dysthymia, PUT OO-0025, (June 1994).

[6]Alison Cobb, "Working with Depressed Women: Causes and Explanations for Depression in Women, 1987.

significant events in a woman's life such as reproduction; menstruation, the post pregnancy period, and menopause all have been said to contribute to gender differences. In some cases, these life events may cause fluctuations in mood swings and sometimes alternate behavioral patterns.

Further, "researchers have confirmed that hormones have an effect on the brain chemistry that controls emotions and mood."[7] Although not considered a disorder in the diagnostic manual for psychiatry (DSM), these extreme changes are generally classified as characteristics of depression.

Depression in African Americans

The truth has been no secret that African Americans are no less prone to depression compared to any other racial or ethnic group. In a recent study by the National Mental Health Association's Public Education Campaign on Clinical Depression, 56 percent of African-American's felt depression was a normal part of the aging process.

Fred Phillips, an Afrocentric psychotherapist believes that African American's have a low awareness of "active" symptoms of depression. Research has proven that depression strikes persons of all race, color and creed, meaning depression is an equal opportunity disorder. However, Phillips also believes that depression in the black

---

[7]Richard Fields, and Russel Vandenbelt, Center City, Hazelden Eudcational Materials, PUT #5521.

community is simply an outcry of oppression. Phillips believes that as a group, African-Americans who live in poverty experience environmental pressures are more likely to become oppressed compared to those who do not live in these conditions. Phillips argues that African-Americans who endure oppressive conditions are more likely to become depressed - due to involuntary environmental factors.

U.S. congressman John Wilson had similar reflections about clinical depression and oppression. During one mid-week morning, someone had stolen the congressman's car. Shortly after the realization of his missing car, the congressman heard some neighborhood boys (on a street corner outside his home) talking about different kinds of metals, colors.., crushed velvet.., etc. "I thought they were talking about cars, so I went over to talk to them, and I said 'Tell me something, What's the best kind of car to buy that nobody wants to steal?' The boys laughed and said 'we're not talking about cars.., we're talking about caskets.., what kind of caskets we want to be buried in."[8]

A rather harsh encounter with reality, the Congressman soon realized that depression among African American's is more than a clinical diagnosis. Additional elements such as poverty, lack of health care and a stressful environment all

---

[8]Mary Ann French, "The Washington Post: Commentary and Opinion," In Black Despair; John Wilson and the Plague of African-American Depression. (June 1993).

contribute to the mental health and the behavioral ingredients of African Americans. Unfortunately, the situation of the young boys on the street corner merely represent a detrimental situation that affect African-American mental health. The theme of the Congressman's point is that depression in some African-Americans is more than a mental health condition, but rather a cycle of oppression.

Hussein Bullah, an African-American clinical psychologist feels that blacks are "over represented in the mental health industry as patients, and markedly under represented as professionals". Bullah feels that the oppressors are often quick to diagnose African American's with an illness. In addition, he also feels that "... as patients, African Americans are less likely to receive mental health treatment, or treatment by less academic professionals."[9]

Both Bullah and Wilson note that the oppressed (African-Americans) learn to wear many masks for different occasions. "African-Americans are more likely to develop skills to detect the moods and wishes of those in authority, and learn to present acceptable public behavior while repressing private-inner thoughts and feelings".[10] The repression of feelings, thoughts and moods will often

---

[9]Ibid.

[10]French, "The Washington Post: Commentary and Opinion."

result in inferior or unhealthy behavior.

Throughout history, African-Americans have endured depression. The repression of private inner-thoughts and feelings includes mental health, therefore it is essential to acknowledge the threshold of human tolerance. This type of pressure translates into the psychopathology of Black Americans.

Depression in the Elderly

Many people are uncomfortable talking about the subject of aging because aging will eventually lead to death. Because society displays the more negative issues of aging and health, many people fear that their own aging and life span will involve a lengthy period of physical decline. There is high visibility in our society about the physically "frail" elder, however few are prone to notice the mental health or psychosocial symptoms of the elderly.

In the year 2000, the United States Department of Health and Human Services estimate that persons aged 65 years and over will represent 34.9 million people or 13.0% of the U.S. population. Despite the impact of our geriatric population, few elderly persons are able to detect psychosocial problems, specifically depression. "Although depression is associated with significant morbidity, mortality and health care costs, it may also be the most

treatable psychiatric disorder in late life"[11] It has been said that elderly persons who are feeling depressed will often consult with their primary care physician, rather than a mental health therapist. Family practice physicians are more likely to be acknowledged first because the elderly are more likely to have a physical ailment against a psycho-social concern. Also, patient and physician environmental factors also play a roll in the recognition of depressive symptomatology.

In conclusion with oppression (as previously stated), African-Americans are at a much greater risk for depression. "Many African-Americans and others in the community - such as pastors, doctors and counselors - don't recognize symptoms of clinical depression, aren't aware that it is a medical illness, and don't know how it is treated".[12]

Collectively, elderly African American's are more likely to consult a religious leader, close friend or church member about a personal mental health problem. It had been said that African Americans tend to seek more non-traditional means of help, opposed to a clinical therapist.

---

[11]Christopher M. Callahan, et al., "Depression in Late Life: The use of Clinical Characteristics to Focus Screening Efforts," Journal of Gerontology: Medical Sciences 49, 1 (1994).

[12]The National Allicance for the Mentally Ill, "Depressive Illness Project," Technical Assistance Information, 1993.

Therefore, it is essential that the African-American community incorporate new and innovative public health techniques and integrate this health care into the community.

Symptoms & Treatment of Depression

Not everyone who has been diagnosed with clinical depression is said to experience every single symptom. Some people experience a few symptoms, while others encounter several. It is important to keep in mind that the severity of depression varies with each individual.

The Symptoms of Clinical Depression are:

- persistent sad, anxious or "empty" mood
- feelings of guilt, worthlessness, helplessness
- loss of interest or pleasure in activities that were once enjoyed, including sex
- insomnia, early-morning awakening or oversleeping
- appetite and/or weight loss, overeating and weight gain
- decreased energy, fatigue, being "slowed down"
- thoughts of death or suicide; suicide attempts
- difficulty concentrating, remembering, making decisions
- persistent physical symptoms that do not respond to treatment such as headaches, digestive disorders, and chronic pain.[13]

Treatment of Depression

The treatment of clinical depression will depend on the therapist and the outcome of the patient's mental health

---

[13]Atlanta, The Mental Health Association - Metropolitan Atlanta, "Do You Know the Warning Signs of Depression?," (April 1993).

evaluation. Typically, clinical depression is treated with a combination of antidepressant medication and or psychotherapy. "Some people do very well with antidepressant medication, while others gain assistance from talk therapy."[14] The antidepressant medication is said to gain relatively quick symptom relief, while psychotherapy has been said to help them learn more effective ways to deal with life long problems.

"Electroconvulsive therapy (ECT) can be useful for individuals with life-threatening depression, such as major depression and persons with suicidal tendencies or persons who are unable to take antidepressant medication."[15] ECT's were used during the 1960's and, in recent year's have been much improved. The treatment of ECT's are given under hospital sedation so that patients receiving electrical stimulation do not feel the pain.

A second type of treatment for major clinical depression are antidepressant medicines and Monoamine Oxidase Inhibitors (MAOI's). MAOIs and antidepressant's are a group of medications that are best known as; tricyclics, lithium and paxill. Often, a doctor will prescribe an antidepressant medication as a drug therapy treatment choice. Today, it is not considered unusual for a physician

---

[14]Internet, "Depression: Medicine Net Power Points about Depression," Diseases and Treatments (March 1997).

[15]Ibid., p. 29.

to try a variety of antidepressant medications before finding the most effective drug for the patient.

Antidepressant's and Monoamine Oxidase Inhibitors can sometimes cause mild side effects such as: dry mouth, blurred vision, dizziness, drowsiness and constipation. "Also if you are taking MAO inhibitors, you will have to avoid aged, fermented or pickled foods."[16] These types of foods have been said to interfere with the chemistry of medication, therefore it is recommended to check with your doctor for certain food restrictions.

Aside from medication as a treatment modality, psychotherapy has been widely used to help depressed individuals. "Talk therapies help patients gain insight into and resolve their problems through verbal 'give-and-take' with the therapist".[17] Whether through family, individual or group therapy sessions, the client is taught how to obtain greater satisfaction through verbal interaction with the therapist.

Cancer Screening

Cancer is said to be the second leading cause of death in the United States, resulting in one of every four (4) deaths from cancer. During 1996, the American Cancer Society had estimated that about 554,740 people will die from cancer - more than 1,500 people a day.

---

[16]Ibid.

[17]Ibid., p. 30.

The astonishing facts assessed to be true predictions about the prevalence of cancer, however further examinations, such as cancer screening have been determined. Cancer Screening is an organized effort to administer exams, questionnaires or health tests to a specific population and to find cancer or cancer symptoms in it's early stages.

The physician or health professionals who administer the cancer screening exams have important roles in the area of health promotion and disease prevention.

The roles should emphasize that health care professionals should be known and respected with credentials in the community, become available and accessible to patients or participants, and be educated and informed of current health maintenance and disease prevention to all patients or participants involved with a screening study.

It is important to remember that screening practices are for the benefit of the patient. Continued efforts to encourage early detection and treatment are important. Currently, a main concern among public health is women, minorities and the elderly. It is hoped that with a combination of early detection programs, more effective ways to deliver high-quality care to the economically disadvantaged; women, minorities and the elderly will provide a better understanding of disease prevention.

Theoretical Framework

The cognitive-behavioral theory was used throughout this study. This specific theory was selected because cognitive psychology along with social development may have certain influences on a person's behavior. Behavioral therapist Albert Bandura indicates that "...behavior is largely driven by conscious thought, or at least by cognitive events which are accessible to consciousness when the patient is asked to describe them. They assume that further problems are largely caused by illogical, irrational or otherwise "faulty" cognition, therefore it is argued that emotional disorders and behavioral problems are best treated by altering cognition...."[18]

In stating this assumption, there may be several theories that would apply to the behaviors and characteristics associated with clinical depression. However, for the purpose of this study, the cognitive-behavioral theory indicates that inappropriate behaviors and actions associated with depression are largely caused by illogical or irrational thoughts. When a clinically depressed individual has manifested irrational or demented behaviors, it would likely be assumed that this type of action is based on cognitive thought.

---

[18]Christina Lee, "On Cognitive Theories and Causation in Human Behavior," Journal of Behavior Therapy and Experiential Psychiatry 23, (1992): 257-268.

Depressive characteristics and symptomatologies are fundamental components when discussing this theory as an explanation of behavior. According to this theory, clinical depression and cognitive thought can play an important role in directing one's behavior. Therefore, the theoretical implication lies in cognitive thought when explaining, predicting or attempting to promote change in healthy human behavior.

Statement of the Hypothesis

The statement of hypothesis is:

1). Elderly African American women who have depressive characteristics are less likely to receive a mammography exam.

The independent variable is depression, and the dependent variable is mammography compliance. There will be a significant relationship between depression and mammography compliance in elderly African-American women.

Definition of Terms

For the purpose of this study, the following constructs have been defined and listed below:

Clinical Depression: The essential features of major depression where symptomatology occurs for at least two weeks. Symptoms exist such as depressed mood, loss of interest or pleasure in nearly all activities.

Cancer: A general term for more than 100 diseases in which abnormal or malignant cells

develop. Cancer is a group or number of diseases caused by the abnormal growth of cells.

Cancer Screening: The search for disease in people without symptoms. Screening may refer to coordinated programs or activities in large populations or groups.

Mammography: An x-ray of the breast; the principal method of detecting breast cancer in women over 40 years of age.

Asymptomatic: To be without noticeable signs or symptoms of a disease. Symptom and disease free.

Compliance: The timely recommendations for cancer screening services or screening practices.

Incidence: The number of new cases to a specific cancer, sickness or disease. The total number of new cases.

CHAPTER III

METHODOLOGY

Research Design

The research design utilized in this study is an exploratory research design. Exploratory research design consists of collecting data to test a relationship between two variables: (1) the independent variable of depression, and (2) the dependent variable of mammography screening examinations among elderly African-American women. Exploratory study designs often use instruments or scales for eliciting the desired information. The researcher is interested in determining if depressive characteristics have associations with breast cancer screening practices using mammography.

Site and Setting

The sampling frame consisted of 128 participants. The participants were elderly female members, visitors and friends of Quality Living Services, Inc (QLS). The survey took place on May 20, 1996. Prior to the administration of this survey, an activity report was sent to all employees of QLS who had assisted with this project.

QLS was incorporated as a non-profit agency in 1985. The purpose of this organization was to provide an extensive system of services, activities, and programs exclusively for senior citizens. The QLS membership consist of about 1,300

senior citizens, members and friends.

QLS has a divine self-help concept of " Seniors helping Seniors." This self-help concept has been the foundation and success of this program. Many of the seniors who volunteer at QLS provide a unique source of " experience, manpower and talent to secure a profound character for this service system."[1]

The geographic location of this project is located at Quality Living Services headquarters based in Fulton county. The area is heavily populated, industrialized, 97% urbanized and is located in the city of Atlanta. In 1996, according to the Atlanta Area Chamber of Commerce, the total 1990 area census population was 648,951" of which more than 50% of the city's population are African-American.[2]

Sampling

Purposive sampling was the technique selected for this study. This sampling design was selected because it is a nonprobability sampling technique. The method of obtaining this information were self-administered questionnaires. Both questionnaires were explained in detail before administration, and upon completion it was collected. The duration in completing both questionnaires took between 20

---

[1]Quality Living Services, Inc., "Yearly Calendar," (January 1995).

[2]Atlanta Area Chamber of Commerce, City of Atlanta, 1996.

to 60 minutes.

All participants in this study were identified as elderly African-American women who are either members or guests of Quality Living Services, Inc.

Instrumentation

The instruments used in this study were two self-administered questionnaires. The SF-36 is a questionnaire used to asses participants physical and psychosocial concerns. The SF-36 is a comprehensive questionnaire that "... is referred to as a generic measure because it assesses health concepts that represent basic human values that are relevant to everyone's functional status and well-being."[3] A likert-type scale was used to measure the mental health variables. This scale was scored by assigning numbers one through six to determine the responses. The scores ranged between 1 and 6, with the highest score of 1 and the lowest score of 6. The numbers were assigned as follows: 1= All of the time, 2= Most of the time, 3= A Good bit of the time, 4= Some of the time, 5= A little of the time, 6= None of the time. This particular questionnaire was developed by the New England Medical Center. In addition to the SF-36, a short questionnaire was constructed by Dr. John F.C. Sung, of the Department of Community Health and Preventive Medicine at Morehouse School of Medicine. This short questionnaire was

---

[3]John E. Ware, "The SF-36 Health Survey Manual & Interpretation Guide," New England Medical Center, 1993.

used to determine if QLS participants had taken a mammogram and the duration of the exam.

Furthermore, this study is only interested in the participant's psychosocial status (depression) and breast cancer screening compliance. Both questionnaires were given to senior members, guests and visitors of Quality Living Services, Inc. at 4001 Danforth Road SW, Atlanta, Georgia 30331.

Method of Analysis

The method of analysis in this study was conducted by the Epi Info v.6 Statistical Package for the Epidemiologist. This system was used to determine the frequency distribution, percentages, mean, median, standard deviation, probability and Chi-Square. Both questionnaires were the data gathering devices used in this study.

CHAPTER IV

FINDINGS

The Epi Info v.6 batch system was used to determine the frequency distribution, mean, median, Chi-Square, probability and standard deviation of the respondents.

TABLE 1

INDEX OF SF-36 HEALTH STATUS SURVEY AND MAMMOGRAPHY EXAM

(N= 128)

As a result of emotional problems, have you ...		*Frequency*	*Percent*
Q.1a	Felt full of pep?		
1=	all the time	11	7.9
2=	most time	49	35.3
3=	some time	29	20.9
4=	good bit time	25	18.0
5=	little time	17	12.2
6=	none time	8	5.8
Mean = 3.086	Median = 3.00	Std. Dev = 1.365	
Q.1b	Felt down in the dumps?		
1=	all the time	12	8.8
2=	most time	5	3.6
3=	some time	6	4.4
4=	good bit time	12	8.8
5=	little time	21	15.3
6=	none time	81	59.1
Mean = 4.956	Median = 6.00	Std. Dev = 1.613	

(Table 1--Continued)

As a result of emotional problems, have you ...		Frequency	Percent
Q.1c Felt Calm & Peaceful?			
1=	all the time	29	21.5
2=	most time	55	40.7
3=	some time	17	12.6
4=	good bit time	16	11.9
5=	little time	8	5.9
6=	none time	10	7.4
Mean = 2.622	Median = 2.00		Std. Dev = 1.470
Q.1d Felt down hearted and blue?			
1=	all the time	2	1.5
2=	most time	8	6.1
3=	some time	4	3.1
4=	good bit time	24	18.3
5=	little time	34	26.0
6=	none time	59	45.0
Mean = 4.962	Median = 5.00		Std. Dev = 1.249
Q.1e Been a happy person?			
1=	all the time	40	29.0
2=	most time	54	39.1
3=	some time	11	8.0
4=	good bit time	20	14.5
5=	little time	3	2.2
6=	none time	10	7.2
Mean = 2.435	Median = 2.00		Std. Dev = 1.460

(Table 1 - Continued)

As a result of emotional problems, have you ...	Frequency	Percent
Q.1f Have you ever had your breast examined by x-ray(Mammogram)?		
1= YES	121	92.4
2= NO	10	7.6
Mean = 1.076 Median = 1.00 Std. Dev = 0.267		
Q.1g This is called a Mammogram. Have you ever heard of it?		
1= YES	128	99.2
2= NO	1	0.8
Mean = 1.008 Median = 1.00 Std. Dev = 0.088		
Q.1h *(if Q.11= YES)* When did you last have a mammogram?		
received mammogram within ≤ 1 year	33	30.6
did not receive mammogram within 1 year	75	69.2

TABLE 2

CROSS TABULATION CHI-SQUARE OF MENTAL HEALTH CHARACTERISTICS AND MAMMOGRAPHY EXAM

Participants who had a mammogram within the past year		
As a result of emotional problems, have you felt ...	Frequency	Percent
Q9a. Full of pep?		
(1-3) = All& most of the time	40	54.1
(4-6) = Little & none of the time	18	48.6
	Chi-square = 0.29, p= 0.59	
Q9b. Down in the dumps?		
(1-3)= All & most of the time	10	52.6
(4-6) = Little & none of the time	46	52.3
	Chi-square = 0.00, p= 0.98	
Q9c. Calm & peaceful?		
(1-3) = All & most of the time	45	57.0
(4-6) = Little & none of the time	9	34.6
	Chi-square = 3.91, p= 0.048	
Q9d. Down-hearted & blue?		
(1-3) = All & most of the time	7	53.8
(4-6) = Little & none of the time	47	52.2
	Chi-square = 0.01, p= 0.91	
Q9e. Been Happy?		
(1-3) = All & most of the time	44	52.4
(4-6) = Some & none of the time	14	56.0
	Chi-square = 0.10, p= 0.75	

Frequency Distribution Findings

The findings indicate that 7.9 percent of the participants felt full of pep all of the time, 35.3 percent (the majority) of the participants felt full of pep most of the time; 20.9 percent of participants felt full of pep some of the time; 12.2 percent felt full of pep a little bit of the time, and the final 5.8 percent of the respondents felt full of pep none of the time.

As a result of emotional problems, only 8.8 percent of the participants felt down in the dumps all of the time. 3.6 percent of the participants felt down in the dumps most of the time; 4.4 percent of the participants felt down in the dumps a good bit of the time; 15.3 percent of the participants felt down in the dumps a little bit of the time, and surprisingly 81 respondents (59.1 percent) felt down in the dumps none of the time.

When asked if they felt calm and peaceful, 21.5 percent of the participants felt calm all of the time; 40.7 percent (the majority of the participants) felt calm and peaceful most of the time; 12.6 percent felt calm and peaceful some of the time; 5.9 percent felt calm and peaceful a little bit of the time, and 7.4 percent of the participants had peaceful characteristics none of the time.

When asked in the questionnaire "As a result of emotional problems I felt down hearted and blue...", only 1.5 percent of the participants felt blue all of the time.

6.1 percent of the participants felt down hearted and blue most of the time; 3.1 percent felt down hearted and blue some of the time; 18.3 percent of participants felt down hearted and blue a good bit of the time. 26.0 percent of the participants had felt down hearted and blue a little bit of the time, and the bulk of the population (59 respondents) or 45 percent of the participants felt down hearted and blue none of the time. According to the findings, 29.0 percent of the participants felt they had been happy all of the time; 39.1 percent had felt they were happy most of the time; 14.5 percent had felt they were happy a good bit of the time; 2.2 percent had felt they were happy a little of the time; and 10 respondents (7.2 percent) had felt they were happy none of the time.

Items from the cancer screening questionnaire were a bit more relevant. When asked if participants ever had their breast examined by x-ray, 121 participants (92.4 percent) had received a mammogram, and only 10 participants (7.6 percent) had never received a mammogram. When asked if participants had ever heard of a mammogram, most of the respondents (99.4 percent) had heard of a mammogram. Only 1 respondent (0.8 percent) had never heard of a mammogram.

The cancer screening questionnaire (questions 1g and 1h) examined the breast cancer screening practices for the targeted population. Approximately 69.2 percent of participants <u>had not</u> received a mammogram within the past

year, and only 30.6 percent of the participants had received a mammogram within the past year.

According to the findings of table 2, the Cross Tabulation analysis revealed few associations between depressive characteristics and mammography compliance with the exception of one depressive variable.

Among those who felt down in the dumps all and most of the time, 10 participants 52.6 percent) had taken a mammogram within the past year and 46 participants (52.3 percent) had taken a mammogram and felt down in the dumps a little and none of the time. The Chi-Square analysis revealed no difference between feelings of down in the dumps and mammography examinations.

Among those who felt full of pep all or most of the time, 40 participants (54.1 percent) had taken a mammogram within one year. 18 participants (48.6 percent) felt full of pep a little of the time yet also had a mammogram within the past year. There was little difference among mammography and emotional feelings of being full of pep.

When asked if participants felt calm and peaceful all and most of the time, 45 participants (57.0 percent) had a mammogram within the past year. However, 9 participants (34.6 percent) also had taken a mammogram but reported feeling peaceful a little bit or none of the time. According to our study, the analysis revealed that as a result of emotional problems, peaceful characteristics have

significant associations among mammography compliance.

Among those who felt down hearted and blue all or most of the time, 7 respondents (53.8 percent) had taken a mammogram within the past year and 47 respondents (52.2 percent) felt blue a little or none of the time and received a mammogram.

As for feelings of happiness and receiving a mammogram within one year, 44 respondents (52.4 percent) had felt happy all or most of the time, and 14 respondents (56.0 percent) felt happy a little or none of the time.

Overall, the findings of this study failed to support most of the hypothesis, and concluded that the occurrence of depressive characteristics did not have relevant associations with elderly participants mammography compliance. The majority of the SF-36 health status depression items were not likely to affect cancer (mammogram) screening behaviors, and only one variable (feeling peaceful) showed significance. As stated earlier, most of the depression variables did not have significant associations with a woman's cancer screening (mammography) practices.

CHAPTER V

DISCUSSION AND SUMMARY

Two questionnaires were utilized in this study to determine weather a relationship exists between depression and mammography compliance. The results of this survey were then analyzed by Epi Info v.6 batch system. It was clear that most of the depression variables from the SF-36 health status survey did not seriously affect a woman's mammography screening behaviors, or have significant associations with breast cancer screening practices.

For years African-American's have endured traditions based on creating and maintaining formal and informal social support systems. Support systems can be implemented in a variety of ways. In mental health, African-Americans are more likely to seek non-traditional therapy measures. To seek a non-traditional measure is to seek a non-clinical approach, such as a church congregation, co-workers, neighborhood elders and close friends. Although it is beneficial to have such positive social support systems, it is critical that African-Americans embrace traditional, clinical measures to remain healthy collectively, as a group of people. When the importance of traditional and clinical guidelines are addressed in our community, health screening behaviors will prosper in an attempt to preserve our health and our future.

Limitations of the Study

One limitation to this study was the sample size. The researcher will not generalize the findings to the entire elderly African-American female population of Fulton county. The researcher can say that the results can be applied to the sample group located at the senior citizen non-residential center, Quality Living Services, Inc.

A second drawback to this study was the SF-36 health status survey. The SF-36 Health Status Survey was a generic scale used primarily with populations less than 65 years of age.

The median age group for participants in this study were between 65-74 years old. After completion of this questionnaire, elderly participants complained of difficulty in reading the questionnaire. Red ink and small style font were manufactured and the standardized questionnaire, and believed to be the chief complaint of the senior participants. It is suggested that for populations greater than 65 years of age, the SF-36 Health Status Survey be modified to larger print size, with standard color (black) ink. To the researchers knowledge, the SF-36 Health Status Survey has not been modified for populations greater than 65 years of age.

Theoretical Implications

The cognitive-behavioral theory informed this research study. This theory strongly emphasizes cognitive thought in

promoting change in healthy human behavior. Important practice skills and additional knowledge can be obtained if the therapist or researcher identifies the cognitive-behavioral theory.

Recommendations

The researcher suggests that for future studies of depression and mammography compliance, greater effort be exerted to study the at home breast self-examination (BSE) method.

"While mammography is the most efficient in diagnosing breast cancer in it's earliest stage, several factors suggest that BSE will continue to play an important role in early detection of breast cancer".[1] BSE is an important screening tool for women of all ages, especially for those who do not have insurance coverage, cannot afford to go to a doctor, or obtain a mammogram exam. In addition, a BSE is a low-cost technique that can be done by anyone in the privacy of their home.

For the purpose of this study, further explorations of BSE's would help acknowledge that the population being studied (elderly females) have better understanding of breast cancer awareness.

---

[1]Bernadine Pinto, R. and R. Wayne Fuqua. "Training Breast-Self Examination: A Research Review and Critique," Health Education Quarterly 18, 4 (1991): 495-516.

Implications for Social Work Practice

Social workers have been commonly known to wear many different hats in many different areas. Practical experiences, life experiences and having a solid knowledge base are considered imperative for today's social workers.

In relation to education, this study provides a format for social workers, in conjunction with other health professionals to help educate elderly African-American women about the early detection of breast cancer, mammography exams and further learning about self-breast exams. Here, the social worker can act as a lay health worker to help disseminate health materials.

Constantly, professional education is charged with identifying the needs of a community or an at-risk group. In social work research, much effort is happening through research training and data based practice.

Social workers can use previous studies, future studies and this study of depression and mammography compliance on a micro and macro level. For example, a social worker can help provide workshops in targeted health centers or communities where there is little or lack of health awareness. This may enable social workers and health professionals to accurately identify the prevalence of a health problem by increasing the awareness in a given population. This knowledge and information is most important to African-Americans because as a group, African-Americans

are said to experience late detection and recognition of cancer and mental health compared to other groups.

APPENDIX A.

CONSENT TO PARTICIPATE IN MEDICAL RESEARCH ON CANCER SCREENING INTERVENTION IN AN INNER CITY COMMUNITY

This study is sponsored by the Minority Biomedical Research Support(MBRS) Program of the National Institutes of Health. The study is being conducted by Morehouse School of Medicine faculty: Drs. John Sung, Mary Williams, Gene McGrady and William McBride. Nadine L. Fowlkes, a graduate student in the School of Social Work from Clark Atlanta University will serve as a student research assistant.

Purpose of study: To determine what you know about cancer and your understanding of how this cancer may be detected through screening tests and medical examinations.

You will be one of several other potential participants associated with Quality Living Services, Inc., (QLS).

The more people understand about early cancer detection decreases the risk of developing the cancer and increases the possibility of a more successful early treatment for those who may have the cancer. We believe you will benefit from participating in this medical research by learning more about cancer and its prevention. This knowledge and information is particularly important to black people because, as a group, they experience a higher rate of cancer and late detection of cancer compared to the general population.

You will be asked to complete the attached questionnaire with about 20 questions, and health status survey with 36 questions. Completing both will take around 20-60 minutes. Your identity and the information that you provide will be known only to the investigators and technical personnel conducting the study. Publication of study data will not directly identify you or provide information which would reasonably link you to this study. After you complete the questionnaire and the survey, and return them to us, we will provide you educational materials that describe cancers especially cancer of the colon and rectum, recommended testing techniques, how often the tests should be done, and where you can obtain the testing. We will then contact you to make sure that you have received the educational materials, and to answer any questions you have. You will be contacted at least once a year for the next 2-3 years to determine if you have obtained cancer screening.

Other educational opportunities including cancer awareness meetings also will be available during the study period. You are welcome to participate.

There is no physical risk associated with your participation in this study. Your participation is voluntary, and you may decide to withdraw at any time.

For answers to pertinent questions about the research, please contact Morehouse faculty at (404) 752-1627 or 1620. For clinical questions please talk to your doctor or contact Dr. Kenny Frontin at 756-1320. For questions pertaining to legal and other rights that you have as a research subject, please contact Dr. Ralph Trottier at (404) 752-1711. Both of these individuals are at the Morehouse School of Medicine. * A copy of this consent form will be provided to you.

I have read and understand the information provided to me about this research project. I have had ample opportunity to ask questions and my questions were satisfactorily answered.

I have been advised of the materials and procedures used in this research study and I understand what is expected of my participation. I voluntarily consent to participate in this research project with the understanding that I may freely withdraw at any time.

_____

Signature of Participant

_____

Date

* The consent form was not provided to participants of this project. This consent form was accepted as a "blanket agreement" by the institution's Executive Director and CEO, Irene Richardson of Quality Living Services., Inc. at 4001 Danforth Road SW, Atlanta, Georgia 30331.

APPENDIX B.

ACTIVITY REPORT FOR CANCER SCREENING SURVEY

Who: Morehouse School of Medicine & Quality Living Services, Inc.

What: Cancer Screening Survey (Health Project)

When: Monday May 20th, 1996

Where: Quality Living Services- 2001 Danforth Road, Atlanta, Georgia 30031

Time: 10:00am -12:00 noon

Why: To improve the importance of receiving health exams among senior citizens, QLS members and visitors.

The same set up is requested of the survey that took place last May 1995. If possible, we would like 5-6 classrooms. In each classroom we hope to occupy around 20-25 persons per classroom. One classroom is requested for males. Males will be kept separate from females for privacy purposes. Since we do not know exactly how many persons will attend and take the survey, we expect a tentative crowd of 100-200 persons. After participants take the survey, everyone should go to the main auditorium where lunch will be served. During lunch, each participant who took the survey will receive a gift as a token of appreciation for participating with this health project.

Your help is appreciated with this project and we look forward to seeing you soon!

APPENDIX C.

INDEX OF SF-36 HEALTH STATUS SURVEY

Q.9 These questions are about how you feel and how things have been with you **during the past 4 weeks**. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the **past 4 weeks ...**

a.	Did you feel full of pep? ...	1	2	3	4	5	6
b.	Have you felt so down in the dumps that nothing could cheer you up? ...	1	2	3	4	5	6
c.	Have you felt calm and peaceful? ...	1	2	3	4	5	6
d.	Did you have a lot of energy? ...	1	2	3	4	5	6
e.	Have you felt downhearted and blue? ..	1	2	3	4	5	6
f.	Have you been a happy person ? ...	1	2	3	4	5	6

All of the time = 1
Most of the time = 2
A good bit of time = 3
Some of the time = 4
A little of the time = 5
None of the time = 6

APPENDIX D.

INDEX OF CANCER SCREENING QUESTIONNAIRE

Listed below are questions regarding breast cancer screening. For each one, please circle the appropriate number.

	YES	NO	DON'T KNOW
Q.10 Have you ever had your breast examined by x-ray?	1	2	9
Q.11 This is called a mammogram. Have you heard of it?	1	2	9

Q.11a *(If Q.11 =YES)*
When did you last have a mammography exam?

_____// _____// _____
month date year

BIBLIOGRAPHY

Alexandria; The National Mental Health Association. "American Attitudes About Clinical Depression and It's Treament". (April, 1996).

Alexandria; The National Mental Health association. "Depression: What You Need to Know". (April, 1994).

Atlanta; Quality Living Services, Inc. Yearly Calendar (January 1995).

American Cancer Society; "Survey of Physicians Attitudes and Practices in Early Cancer Detection". Cancer: Journal for Clinicians 40, 2, 111-113.

Anda, Robert F., M.D. "Screening Mammography for Women 50 Years of Age and Older: Practices and Trends, 1987". American Journal of Preventive Medicine 6, 3, (1990).

Bella, Selan H. "The Late Life Counseling Service: A Program for the Elderly". Hospital and Community Psychiatry:

Brown, Dianne R., et.al "Symptoms of Depression Among Older African-Americans: An Analysis of Gender Differences". The Gerontologist 32, 6, (1992).

Callahan, Christopher M. "Depression in Late Life: The Use of Clinical Characteristics to Focus Screening Efforts". Journal of Gerontology: Medical Sciences 49, 1, (1994).

Chronic Disease Control Division, Center for Environmental Health and Injury Control--Centers for Disease Control. "Premature Mortality Due to Breast Cancer--United States". Journal of American Medical Association 258 (1987): 3229-3231.

City of Atlanta. Atlanta Area Chamber of Commerce, 1996.

Clark, David A. "Symptom Differences in Major Depression, Dysthymia, Panic Disorder, and Generalized Anxiety Disorder". American Journal of Psychiatry 151, 2 (February 1994).

Cobb, Allison. Working with Depressed Women: Causes and Explanations for Depression in Women. New York: Gardner Press, 1987.

Fields, Richard., et.al. "Understanding Depression and Mood Disorders". Hazelden Educational Materials, PUT #5521.

Freeman, Harold. P, MD. "Cancer in the Socioeconomically Disadvantaged. Cancer 39, 5 (1989).

French, Mary Ann. The Washington Post Commentary and Opinion. In Black Despair; John Wilson and the Plague of African--American Depression. June (1993).

Gregg, Jessica. "Explanatory Models for Cancer Among African-American Women At Two Atlanta Neighborhood Health Centers: The Implications For A Cancer Screening Program." Social Science Medicine 39, 4 (1994): 519-526.

Helmrich, S.P.,et.al. "Risk Factors for Breast Cancer". American Journal of Epidemiology 117, 35-45.

Internet. "Depression; MediciNet Power Points About Clinical Depression". Diseases and Treatments (March 1997).

Kleinmann, LeAnne. "The Mammogram Muddle". Health (June, 1990).

Lee, Christina. "On Cognitive Theories and Causation in Human Behavior". Journal of Behavior therapy & Experiential Psychiatry 23, 4 (1992): 257-268.

Magruder, Kathryn M., et.al. "Who Comes to a Voluntary Depression Screening Program? American Journal of Psychiatry 152, 11 (November 1995).

Mandelblatt, Jeanne., M.D., et.al. "Breast and Cervical Cancer Screening of Poor, Elderly, Black Women: Clinical Results and Implications". American Journal of Preventive Medicine 9, 3 (1993).

Markowitz, John C., M.D. "Psychotherapy of Dysthymia." American Journal of Psychiatry 151, 8 (August 1994).

Mason, James O., M.D. "Improving the Health of Minorities". Public Health Reports 104, 6, 523-526.
Preventive Medicine 9, 3 (1993).

McNamee, Jane E. "Prevention of Suicide". Canadian Medical Association Journal 142, 11 (1990).

Oxman, Thomas E., M.D., "What is the Relationship Between Depression and Dementia in the Elderly?" The Harvard Mental Health Letter (April, 1994).

Pinto, Bernadine., Fuqua Wayne R. "Training Breast-Self Examination: A Research Review and Critique". Health Education Quarterly 18, 4 (Winter 1991): 495-516.

Rockville; National Institute of Health, National Institute of Mental Health; "Dysthymia". PUT# 00-0025, (June, 1994).

Sung, John F.C. "Cancer Screening Intervention Among Black Women in Inner-City Atlanta-Design of a Study". Public Health Reports 107, 4 (January 1992): 381-387.

Urban, Nicole., ScD. "Mammography Screening: How Important is Cost as a Barrier to Use?" American Journal of Public Health 84, 1 (January 1994).

Ware, John E. "The SF-36 Health Status Survey Manual & Interpretation Guide". New England Medical Center (1993).

Washington DC; U.S. Public Health Service. "Depression in Adults". Clinician's Handbook of Preventive Services--Put Prevention into Practice Program. (May 1995).

Zapka, Jane G. "The Call for Change in Breast Cancer Screening Guidelines". American Journal of Public Health 84, 1 (January 1994).